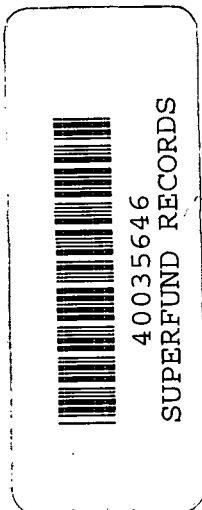


Scott R.
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- ° September 28, 1961
 - Letter from Raymond McNerney (son of local landowner) to Missouri Conservation Commission (MCC) requesting investigation of pollution in Spring River.
- ° October 9, 1961
 - Letter from MCC to Missouri Water Pollution Board (MWPB).
- ° October 23, 1961
 - Letter from MWPB to the Hoffman-Taff Company (H-T) investigate source of pollution, similar to past pollution problem at H-T plant in Wilson Creek at Springfield, Missouri.
- ° March 25, 1965
 - Letter from MWPB to H-T stating a permit will be required for waste discharge into Spring River.
- ° April 2, 1965
 - Letter from MWPB to H-T requesting schedule for pollution abatement and permit application submission.
- ° October 15-17, 1966
 - Opened "Syntex" Trench #1.
- ° April 5, 1967
 - Closed "Syntex" Trench #1, opened Trench #2.
- ° August 7, 1967
 - Letter from MWPB to H-T requesting time schedule for abatement of pollution.
- ° November 10-13, 1967
 - Closed "Syntex" Trench #2, opened Trench #3.
- ° May 1968
 - Hoffman-Taff starts producing herbicide orange for military. Detection limits 0.1 ppm dioxin.
- ° November 21-22, 1968
 - Closed Syntex Trench #3.
- ° February 1969
 - Hoffman-Taff discontinues herbicide production.
- ° April 9-16, 1969
 - Opened "Syntex" Trench #4.
- ° July 3, 1969
 - Nitine agreement with NEPACCO to buy 1,000,000 lbs hexachlorophene the first year.



Site: Verona
 ID #: 100007452154
 Peak: 17.7 0751
 Area: 9.61

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- November 18, 1969
 - NEPACCO leased "orange" manufacturing line.
- December 1969
 - Syntex acquires Verona plant.
- February 1970
 - H-T shipped final product (agent orange) to Kelly AFB.
- April 15, 1970
 - NEPACCO starts production, first batches TCP.
- May 15, 1970
 - NEPACCO completed first batch hexachlorophene.
- August 21-28, 1970
 - Opened "Syntex" Trench #5.
- October 6, 1970
 - NEPACCO ships still bottoms to Baton Rouge, Louisiana for incineration by Rollins Environmental Services.
- October 13, 1970
 - NEPACCO ships second load of still bottoms to Louisiana for incineration.
- December 9, 1970
 - NEPACCO ships third load of still bottoms to Louisiana for incineration for a total of 12,609 gallons.
- January 21, 1971
 - Memo, MWPB to office file, Black and Veatch still studying waste treatment system for H-T. Problems arose from trying to detoxify waste from NEPACCO.
- February 9, 1971
 - Letter from H-T to MWPB stating steps to eliminate seepage and overflow from lagoons. Discussion on NEPACCO's waste.
- February 16, 1971
 - Russell Bliss removes 3,000 gallons of still bottoms.
- March 23, 1971
 - NEPACCO fire.
- March 26, 1971
 - Letter from Missouri Division of Geological Survey and Water Resources to MWPB on lagoon survey and black tarry residue in open ditch resulting from March 23rd fire.
- April 1, 1971
 - Letter from landowner to MWPB requesting an inspection of H-T because of information on midnight dumping of waste.

- ° April 1-8, 1971
 - Closed "Syntex" Trenches #4 and #5.
- ° April 3, 1971
 - Office memo of MWPB on NEPACCO contacting Conservation Chemical Company for waste disposal.
- ° May 10, 1971
 - Memo of H-T on inspection of plant by MWPB on May 4, 1971, with ^{info} of concern, high BOD's, COD's, waste hexacholophene, ineffectiveness of waste treatment and seepage from lagoons.
- ° May 12, 1971
 - Memo MWPB on-site inspection of H-T and NEPACCO operations. Hexachlorophene spill, H-T sanitary treatment facility serves only as a holding basin.
- ° May 20, 1971
 - Russell Bliss removes 3,500 gallons of still bottoms. Truck ticketed as being overweight. Driver off loads a portion of waste on Bliss farm in Rosati, Missouri. All of 70 chickens died within next two weeks.
- ° May 24, 1971
 - Letter from Missouri Division of Geological Survey and Water Resources to MWPB indicating testing is being done on H-T lagoons.
- ° May 25, 1971
 - Bliss removes 3,000 gallons of still bottoms.
- ° May 25 or 26, 1971
 - Shenandoah Stables horse arena sprayed with estimated 2,000 gallons of still bottoms or still bottoms and oil.
- ° May 28, 1971
 - Letters from Geologic Survey to MWPB and H-T indicating that chemical tests were inconclusive and further studies to be done. Also checking S. B. Erwin's spring.
- ° May 30, 1971
 - Dead birds start to appear in Shenandoah.
- ° June 11, 1971
 - Bubbling Springs horse arena sprayed with oil-still bottom mixture.

- June 14, 1971
 - Judy Piatt hospitalized at Missouri Baptist with severe headaches, swelled sinuses, varying blood pressure, blurred vision, inner ear swelling, lose of appetite, swelling of right gland of neck and overactive kidneys.
- June 14, 1971
 - Letter from CDC to MWPB reporting on contaminated spring on Mr. Erwin's farm.
- June 15, 1971
 - H-T memo, water quality analysis of spring on S. B. Erwin's farm indicated bacteriological pollution (total plate count 65×10^6 organisms per ml).
- June 16, 1971
 - Bliss sprays Timberline Arena with oil-still bottom mixture.
- June 23, 1971
 - Memo MWPB studies indicate possible leakage from lagoons to Mr. Erwin's springs.
- June 29, 1971
 - Letter from Geological survey to MWPB, indicating Verona septic tanks should also be tested for leakage into Spring River.
- By first of July 1971
 - 12 cats dead at Shenandoah.
- July 1971
 - NEPACCO takes still ^{bottoms} ~~bottoms~~ and other TCDD contaminated material to Denney farm.
- By July 6, 1971
 - 2 dogs dead at Shenandoah.
- July 30, 1971
 - Bliss removes 6,000 gallons of still bottoms.
- August 1971
 - Lori Piatt develops diarrhea and stomach pains in August 1971.
- August 3, 1971
 - Letter from landowner to MWPB indicating pollution source from H-T entering Spring River.
- August 5, 1971
 - Postmortem on 2-year Appaloosa from Shenandoah Stables suggest death caused by chemical intoxication.

- ° August 10, 1971
 - Status report on dye tracing at Verona by Missouri Geological survey, although inconclusive, lagoon complex is suspect.
- ° About August 12, 1971
 - Andrea Piatt, daughter of co-owner of Shenandoah starts to develop medical problems.
- ° August 16, 1971
 - Letter from MWPB to EPA indicating problems in Spring River for past 2-3 years by H-T, steps being taken to alleviate groundwater contamination.
- ° August 22, 1971
 - Contaminated soil from Shenandoah Stables placed in Highway 61 fill - Andrea Piatt hospitalized.
- ° August 24, 1971
 - First CDC report, Lincoln County Horse Arena, compatible with PCB intoxication.
- ° August 27, 1971
 - Dr. S. L. Nelson, Veterinary School, University of Missouri-Columbia, diagnosis on quarter horse from Shenandoah (Tiny Poco) is, "intoxication of unknown etiology."
- ° August 29, 1971
 - Andrea Piatt discharged from hospital.
- ° September 1, 1971
 - Memo, MWPB, samples of Spring River and Erwin farm spring with COD results (149 mg/l).
- ° September 8, 1971
 - Analytical Biochemistry Laboratories in Columbia, Missouri reports 125 ppm of Arclor 1242 (BCB) in Shenandoah soil sample.
- ° September 8, 1971
 - NEPACCO denied further use of lagoons on Syntex property for disposal of wastewater.
- ° September 9, 1971
 - Letter from H-T to MWPB, 1200 noon September 8, 1971, H-T will discontinue treatment of liquid wastes from NEPACCO.
- ° September 17, 1971
 - Memo to MWPB from NEPACCO asked about feasibility of discharging waste to the Aurora STP.

- ° September 20, 1971
 - Letter from NEPACCO to MWPB states that organic waste stream is being disposed of by incineration.
- ° September 27, 1971
 - Letter from MWPB to NEPACCO approving use of irrigation for the vacuum loop water.
- ° October 4, 1971
 - Bliss removes 3,000 gallons of still bottoms.
- ° October 25, 1971
 - Bliss removes last 3,000 gallons of still bottoms for total of an estimated 21,500 gallons.
- ° October 30, 1971
 - National Oil and Supply starts trucking NEPACCO wastewater to Neosho Digester.
- ° November 2, 1971
 - Reconnaissance of Spring and Elk River basins by EPA, pollution from H-T noted.
- ° November 6-13, 1971
 - Entire "Syntex" trench area smoothed over.
- ° January 10, 1972
 - NEPACCO makes last batch of hexachlorophene, total 328 batches of TCB and 611 batches of hexachlorophene.
- ° February 1972
 - Lori Piatt treated for similar symptoms as those of her mother.
- ° February 8, 1972
 - National Oil and Supply completes removal of wastewater to Neosho Digester for a total of 225,000 gallons.
- ° Spring of 1972
 - Jesse Orr, a Bliss employee, approaches Piatt and offers to sell information regarding the source of material sprayed on arena.
- ° April 1972
 - Hampel removes additional soil from Shenandoah Stable and places in slough adjacent to stables. Hampel hospitalized with severe headaches, blurred vision, loss of appetite, overactive kidneys, hot swelled kness.
- ° April 27, 1972
 - Autopsy on horse owned by Bliss suggests a chemical.

- July 1972
 - Nitine, distributor of NEPACCO hexachlorophene taken over by American Cyanamid. Remaining hexachlorophene inventory sold back to NEPACCO.
- July 1972
 - Judy Piatt treated again for similar symptoms. Symptoms continue.
- August 1972
 - Contaminated soil removed from Timberline Stables and buried in a sanitary landfill near Jefferson City, Missouri.
- September 1972
 - FDA begins requiring new drug applications for all drugs containing 0.75% or more hexachlorophene and also requires that these drugs be made available only by prescription.
- October 22, 1972
 - Drinkards move from Timberline.
- November 20, 1972
 - Bliss deposed on behalf of Hampel and Piatt.
- November 30, 1972
 - Dr. J. H. Evans, veterinary, deposed on behalf of Piatt and Hampel.
- March 21, 1973
 - Approximately 2500 to 5100 yards of soil excavated from Bubbling Springs horse arena, placed as fill at Minker residence and Vern Stout property.
- May 13, 1974
 - NEPACCO liquidates its assets sells inventory to Winthrop and Givaudan.
- August 2, 1974
 - Internal CDC memorandums discuss identification of TCDD in Shenandoah samples and need for additional followup investigation to determine source of material.
- August 5, 1974
 - Division of Health informs Bliss by letter of identification of TCDD and indicates they will be contacting him to examine records and determine source.
- August 8, 1974
 - Carter and Zack with CDC, Atlanta depart for St. Louis to assist Missouri Division of Health in TCDD investigation.

- ° August 8 or 9, 1974
 - Phillips, Carter and Zack visit Shenandoah Stables, take soil and wood samples, new owners report no problems.
- ° August 9, 1974
 - CDC samples at Bubbling Springs.
- ° August 10, 1974
 - CDC and State investigators visit Timberline Stable and take samples.
- ° August 12, 1974
 - CDC samples drainage from about 50 trucks and gravel at Bliss-Lindberg facility.
- ° August 12, 1974
 - CDC samples Mid-America Arena, grounds outside Mid-America and Bliss Fontenac storage facility off of Lindberg Boulevard.
- ° August 14, 1974
 - CDC samples Minker and Stout sites.
- ° August 20, 1974
 - CDC contacts Defense Services Administration and learns that the Army had cancelled contract with H-T for production of 2,4,5-T and that presumably surplus chemicals were shipped to Kelly A.F.B., San Antonio.
- ° August 21, 1974
 - From Fike Chemical Nitro West Virginia, CDC learns that H-T may have a contract to distill 2,4,5-T.
- ° August 21, 1974
 - In telephone conversation with Dr. John Davidson of Dow it is recommended that CDC confirm analysis through Dow or Dr. Oswald and Harold Ross with EPA.
- ° August 22, 1974
 - CDC discusses situation with Dow Chemical which expresses interest in high concentration form Shenandoah and offers to confirm analysis.
- ° August 22, 1974
 - CDC contacts Rick Bugby, Syntex, Verona plant manager, learns that they made "herbicide orange" for the military and then NEPACCO started making hexachlorophene on same production line.

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- August 22, 1974
 - Paul Niedner, Piatt's attorney, transmits to CDC list of witnesses and subpoenas, list of places where Bliss spayed or dumped or picked up waste.
- August 23, 1974
 - CDC request copy of hospital records of Andrea Piatt from Children's Hospital, St. Louis.
- August 23, 1974
 - CDC contact Edward Michaels, President of NEPACCO. Michaels to check records and get back to CDC about who hauled wastes.
- August 27, 1974
 - EPA cancels hearing on use of 2,4,5-T and TCDD because of inadequate detection limits for TCDD.
- August 27, 1974
 - Hooker Chemical informs CDC that, their only purchaser of TCP in the Missouri area between 1968 and 1971 was NEPACCO.
- August 28, 1974
 - Piatt recalls, in telephone conversation with CDC investigators, death of 48 horses and 6 mares which foaled out of 39 bred and a number of birth defects.
- August 28, 1974
 - CDC learns in telephone conversation with Bill Ray that Bliss was hired to remove TCP still residues.
- August 28, 1974
 - Bliss recalls, in telephone conversation with CDC investigators, that he had hauled material from a company in the Springfield area. Did not recall name, remembered that material was heavy and had a very remarkable odor. Bliss indicated he would check records.
- August 18, 1974
 - Law firm, representing Timberline horse owners, requests information from CDC.
- August 29, 1974
 - Clayton Chemical Co. in East St. Louis, tells CDC they purchased waste materials from Bliss for last three years.

- August 29, 1974
 - Michaels, President of NEPACCO, provides CDC with payment days for removal of still bottoms and wastewater by Rollins, IPC and National Oil and Supply.
- On or about August 24, 1974
 - Samples are taken at Bliss farm in Rosati.
- August 29, 1974
 - Mrs. Bliss contacts CDC to inform investigators Bridal Spur Hunt Club was actually oiled two days after Shenandoah was oiled.
- August 29, 1974
 - CDC interviews members of horse troop at Bubbling Springs.
- August 30, 1974
 - CDC learns that IPC had subcontracted hauling of NEPACCO still bottoms to Bliss.
- August 30, 1974
 - CDC gets dates from Bliss as to when he hauled out still residues. Bliss reports material put into tank B-1 at Frontenac and that 90 percent was sold to Midwest Refinery and that M. T. Richards bought some.
- August 30, 1974
 - CDC contacts National Oil and Supply in Springfield, Missouri and learns that they started trucking wastewater out of Verona to Neosho in the winter months of 1971-1972.
- August 31, 1974
 - Phillips, Carter and Eklund interview Godfrey Moll and Bill Ray in Verona, take samples of still bottoms from tank.
- September 3, 1974
 - In letter, Dr. Robson, Children's Hospital, expresses doubt about cause and effect relationship in Andrea Piatt's illness.
- September 4, 1974
 - Memo of telephone conversation with Pat Phillips indicates that EPA Region VII informed as to TCDD being the cause of the horse deaths. Investigation still underway.
- September 4, 1974
 - CDC learns in telephone conversation that some of NEPACCO still bottoms went to Rollins Environmental in Baton Rouge.

- ° September 4, 1974
 - CDC talks with Midwest Oil and Refinery and learns that they have bought salvage oil "almost daily" from Bliss.
- ° September 6, 1974
 - CDC contacts M. T. Richards, owner of refinery in Crossville, to learn that the company purchased oil from tank B-1 and that sludge is put on roads near refinery.
- ° September 10, 1974
 - Carter, Kimbrough and Heath of CDC discuss the NEPACCO investigation with Firestone of FDA - express concern about tank of still residues still in Verona. Firestone reports NEPACCO July 1970 samples of TCP contained 0.5-ppb TCDD and PCB's.
- ° September 13, 1974
 - Carter contacts Dr. C. W. Collier of EPA Office of Pesticides Programs regarding the state of TCDD experimentation. Carter is given name of Dr. Harry Trask of EPA Office of Solid Waste Management as a contact regarding disposal of TCDD contaminated soil.
- ° September 13, 1974
 - By letter, Senator Hart, Chairman of Subcommittee on the Environment, inquiries of secretary, Department of Health, Education and Welfare about the horse sparring episode.
- ° September 13, 1974
 - Carter contacts Dr. Billy Welch, Office of Environmental Affairs, Pentagon who reports that the Air Force feels that half-life of TCDD in soil is about a year.
- ° September 16, 1974
 - CDC contacts Dr. Gentzender with Dow Chemical Company regarding TCDD toxicity studies the company has been doing with sheep and cows. Dr. Gentzender reported no chemical illness or signs of toxicity.
- ° September 18, 1974
 - Soil samples taken from roads around M. T. Richards Refinery in Crossville, Illinois - samples shipped to CDC, Atlanta.

- ° On or about September 23, 1974
- ° September 24, 1974
- ° September 24, 1974
- ° September 25, 1974
- ° September 26, 1974
- ° On or about September 27, 1974
- ° September 27, 1974
- ° September 30, 1974
- ° October 1, 1974
- ° October 2, 1974
- ° October 2, 1974
- ° On or about October 11, 1974
- ° On or about October 25, 1974
- Secretary of HEW responds to inquiry by Senator Hart.
- Analysis of sample of residue from tank in Verona still pending.
- Piatt sends PHillips copies of records on horse symptoms and deaths.
- Greg Brown of IPC provides CDC with haul dates, invoice dates and volumes of waste hauled by Bliss - one haul date not available.
- Hampel and Piatt file suit against Bliss, Signet Graphics, Syntex, Hoffman-Taff, NEPACCO and IPC for \$600,000.
- Godfrey Moss²¹¹ determines there is about 4,300 gallons of still bottoms remaining in tank in Verona.
- CDC contacts Dow Chemical regarding proper methods for disposal of tank residue in Verona.
- Dow, stressing temperature and time, suggests incineration for tank contents in Verona and deep burial for tank.
- CDC discusses disposal methods for tank and contents with Wallen, EPA, Toxic Substances.
- Phillips transmits information provided by Piatt on horse symptoms and deaths to CDC.
- CDC in letter to Missouri Division of Health recommends incineration of tank contents in Verona and deep burial of tank⁽⁰⁾ copies to Firestone (FDA) and Wallen (EPA).
- EPA approves test burn for the incinerator ship Vulcanus.
- Preliminary analysis of residue samples from tank indicate 800 to 1,000 ppm TCDD.

- ° On or about
October 20, 1974
 - With TSCA and RCRA legislation before Congress, Senate Committee on Commerce requests additional information from CDC regarding horse arena incident.
- ° November 1, 1974
 - Bliss files cross-claim against Signet Graphics, Syntex, Hoffman-Taff, NEPACCO and IPC.
- ° November 1, 1974
 - Grizzle purchases Shenandoah Stables.
- ° November 18, 1974
 - CDC in telephone conversation with Phillips learns that neither Syntex nor NEPACCO have made any progress in disposal of tank and contents.
- ° December 10, 1974
 - Defendant, IPC, files answers to interrogations of Hampel and Piatt.
- ° January 30, 1975
 - Dow confirms 32 ppm 2,3,7,8-TCDD in Shenandoah soil sample collected by Piatt in 1971 before excavation.
- ° February 7, 1975
 - Columbia Missourian in regard to the Minker site quotes Phillips as saying "Our standing recommendation would be that this soil be excavated and disposed of in a sanitary landfill. But I doubt that anything is going to be done at either of these sites..."
- ° February 12, 1975
 - CDC contacts Rollins Environmental regarding details of tank in Verona and follows up by letter February 14 with discussions of hazard and recommendations for handling.
- ° February 24, 1975
 - Syntex press release indicating that 4,600 gallons of residue left in tank by NEPACCO contained 350 ppm dioxin.
- ° February 28, 1975
 - Carter and Kimbrough deposed in suit brought by Hampel and Piatt.

- ° March 31, 1975
 - CDC finalizes report for administrative use giving details of horse arena incident and recommending among other things, excavation of residential fills and incineration of tank contents. Report distributed to the following:
 - D. P. Rall, Director, NIEH, RTP, North Carolina
 - L. Plumlee, Medical Advisor, EPA, Washington
 - J. Finklea, Director, NIOSH, Rockville, Maryland
 - D. Donnell, Missouri Division of Health, Jefferson City, Missouri
 - P. Phillips, Missouri Division of Health, Jefferson City, Missouri
- ° On or about April 17, 1975
 - Rollins Environmental declines to contract for disposal of tank contents in Verona. Pollution control in Shokopee, Minnesota contacted. At this time concentration of TCDD in tank estimated at 306 to 356 ppm.
- ° April 11, 1975
 - Bliss deposed on behalf of IPC. Bliss states he hauled last load for \$500 in a direct agreement with NEPACCO. Date not given.
- ° April 11, 1975
 - Browne of IPC deposed on behalf of Hampel and Piatt.
- ° April 17, 1975
 - Phillips sends report of horse arena incident to Morris Tucker, EPA, Region VII. Report states that TCDD in residential yard fills was detected in concentrations of 0.5 and 2 ppm. Shenandoah slough area and Mid-America Arena not mentioned.
- ° April 21, 1975
 - Regional EPA Administrator writes letter to Senator Eagleton explaining status of tank in Verona and indicating that no federal agency has regulatory authority over the problem but stating that TSCA now before Congress would provide such authority.

- ° April 23, 1975
 - Moll, vice-president Syntex, informs CDC that arrangements with Pollution Control for incineration of residues in Verona have been completed.
- ° April 22, 1975
 - Plumlee circulates CDC report of March 31 to following at EPA Headquarters:
 - Director, Office of Legislation
 - Deputy Assistant Director, Office of Legislation
 - Deputy Assistant Administrator for Solid Waste Management Programs
 - Director, Hazardous Waste Management Division
 - Chief, Guidelines Branch, Hazardous Waste Management Division
 - Acting Deputy Assistant Administrator for Program Integration
- ° May 11, 1975
 - Columbia Daily Tribune article indicates that Minnesota Pollution Control agency not aware until "last week" that Pollution Control, Inc. PCI was considering handling TCDD. MPCA may delay decision.
- ° May 16, 1975
 - Moll deposed on behalf of Hampel and Piatt.
- ° May 16, 1975
 - In-house, MDNR, memo, Eigner briefs Karch, Director, Division of Environmental Quality on TCDD situation including locations of excavated soil and progress toward incineration of remaining residue in Verona by Pollution Control, Inc. (PCI) in Minnesota.
- ° June 11, 1975
 - Bob Lindholm, Assistant Attorney General with Missouri Attorney General's Office, inquires of Ken Karch, Director, Division of Environmental Quality, about locating sites where TCDD contaminated soil was used as yard fill so that proper precautions can be taken.

- ° June 12, 1975
 - Kimbrough, CDC Atlanta^a, urges EPA via letter to des Rosiers to grant emergency recount for disposal of tank residue in Verona.
- ° June 16, 1975
 - Ocean Combustion Service, owner of Vulcanus, writes Phillips - provides specifications on miscellaneous aspects of handling 4,300 gallons of still bottoms in Verona.
- ° June 23, 1975
 - Barkley (Syntex) writes Phillips expressing reservations about having tank in Verona declared an imminent public health hazard to facilitate issuance of EPA emergency permits for disposal via incineration on the Vulcanus.
- ° June 25, 1975
 - Danforth, Missouri Attorney General, writes Russell Train, Administrator, EPA, urging an emergency permit for transport and incineration of Verona tank residues on board the Vulcanus.
- ° On or about July 14, 1975
 - Attorney General Danforth, Missouri, requests emergency ocean dumping permit for still bottoms remaining in Verona.
- ° July 22, 1975
 - Robinson and Eigner of Missouri Division of Environmental Quality, in draft unsigned memo (with Phillips' concurrence) concludes excavation of residential fill is overly cautious because of TCDD half-life of one year and chance of human contact appears to be much less than those experienced at Shenandoah.
- ° July 25, 1975
 - Hampel and Piatt file fifth amended petition dropping IPC, Syntex, Hoffman-Taff, and Signet Graphis from the suit and seeking about \$408,000 in damages.
- ° August 4, 1975
 - Phillips informs Baker, CDC, that Syntex plans to use the Vulcanus to dispose of tank residue - arrangements are tentative.

- ° August 8, 1975
 - Syntex files motion for dismissal of Hampel and Piatt suit against Syntex and Hoffman-Taff.
- ° August 13, 1975
 - Ocean Combustion Service writes Phillips - informs the company will not be able to handle 4,300 gallons of still bottoms.
- ° August 27, 1975
 - Michaels deposed in behalf of Hampel and Piatt.
- ° September 14, 1975
 - Dr. Case writes Kimbrough to inform her that he has referred a Dr. Galeota, Director of Student Health at the University who has a female patient (unidentified) who worked for Bliss from February to April 1974, who developed symptoms similar to those of the younger Piatt girl.
- ° January 1, 1976
 - Letter from Assistant Surgeon General to Senator Humphrey states that 3 firms in the U.S. have furnaces capable of destroying the Verona residue but that two of them have not been able to get permission from states to bring material in. The third firm has a portable furnace but is asking \$250,000 for disposal.
- ° September 29, 1976
 - Commoner, B. and Scott R. transmit summary report of horse arena incident to Italian authorities. Copy to Rodger Williams, EPA, Washington.
- ° October 22, 1976
 - Emil Lorz, former Hoffman-Taff employee, attests that these operating conditions which would result in a TCDD concentration of 330 ppm in still residues would be an unintended inadvertence and that such an event would be considered an accident in the chemical industry.
- ° November 6, 1976
 - Circuit Court of Pike County, enters judgement of \$57,000 for Piatt and \$43,000 for Hampel against NEPACCO.

- ° February 9 1977
 - At Frontenac facility Bliss transfers contents of tank B-1 to B-5. MDNR gives Bliss permission to remove all tanks but B-5.
- ° April 19, 1977
 - EPA begins federal cleanup action of chemicals and PCB's at a site in Dittmer, Missouri which Bliss was involved in. Cleanup, which cost in excess of \$515,000, continued through May 29, required 4,318 drums for containerization of contaminated soil.
- ° June 1977
 - Pat Drinker (Timberline) undergoes physical examination at Mt. Sinai School of Medicine, New York.
- ° April 1978
 - Verona changed from individual septic tanks to an oxidation ditch unit for sewage treatment.
- ° Summer of 1978
 - EPA collected water, sediment, and fish flesh samples 3 miles downstream from Syntex, with the exception of 2 phthalates all priority pollutant analyses were below detection limits.
- ° November 20, 1978
 - Jay Edward Covert, Bliss employee, deposed on behalf of Hampel and Piatt.
- ° February 1979
 - EPA conducted O&M and NPDES inspection at the Verona Municipal Wastewater Treatment Plant. Contained <0.5 ng/l 2,3,7,9-TCDD.
- ° March 30, 1979
 - Two Bliss employees drive tank containing contents of B-5 from Frontenac to Baton Rouge, Louisiana for incineration.
- ° April 5, 1979
 - Escorted by MDNR, Bliss takes 22 drums of solids from tank B-5 at Frontenac to Bob's Home Service in Wright City, Missouri.
- ° October 1979
 - EPA receives anonymous phone call alleging other NEPACCO waste disposal sites in southwest Missouri. EPA conducts 2-week investigation, interviews 25 people and identifies three potential sites including Denney farm site, Syntex trenches and Baldwin Park. Begins assembly files on NEPACCO from various sources.

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- December 5-6, 1979
 - EPA/SVAN samples 3 municipal wells, 6 private wells in Aurora and mineshaft standing water in Baldwin Park, results negative for TCDD.
- January 7, 1980
 - EPA samples drums on Crider farm.
- January 25, 1980
 - Rollins Environmental by letter reports to EPA Region VII that they accepted 12,609 gallons of "chlorinated hydrocarbons" from NEPACCO.
 -
- February 12, 1980
 - EPA circulates draft study plan for sampling investigation of Denney farm site.
- April 22, 1980
 - EPA initiates sampling investigation of Denney site.
- May 1980
 - EPA/SVAN prepares and distributes contingency plan for Syntex TCDD reduction project.
- May 19, 1980
 - With EPA overview, Syntex begins TCDD reduction project for 4,300 gallons of NEPACCO still bottoms left in tank in Verona. Reduction exceeds 99 percent.
- June 20, 1980
 - Wright State reports total TCDD in Denney site samples up to 319 ppm. EPA/SVAN initiates weekly sampling of private wells and surface waters around Denney site and using 311 funds puts temporary cap over trench. Ecology and Environment initiates engineering study. EPA enters discussions with Syntex Agribusiness.
- August 11, 1980
 - EPA begins another week of investigation in southwest Missouri to followup on additional leads and tips resulting from Denney site publicity.
- August 15, 1980
 - Syntex removes drums from Crider farm along with some hay, corn and potatoes.
- August 15, 1980
 - EPA inspects Rusha farm and collects samples of clay filter material and feed lot soil.

- August 27, 1980
 - Confidential informant provides MDNR with information on activities of Russell Bliss.
- September 1980
 - Water and Wastewater School officials in Neosho, Missouri take sample of NEPACCO wastewater residue to Wright State for TCDD analysis.
- September 12, 1983
 - Syntex enters into consent decree to clean up Denney farm site.
- October 29, 1980
 - EPA/SVAN circulates to Regional Office status report on NEPACCO sites in southwest Missouri.
- October 30, 1980
 - Michaels, President of NEPACCO, deposed on behalf of Piatt and Hampel.
- November 18, 1980
 - Wright State reports 1.8 to 1.9 ppm total TCDD in Neosho sample of NEPACCO wastewater residue.
- January 15, 1981
 - EPA/SVAN first learns about TCDD in Neosho from reporter.
- January 19, 1981
 - EPA/SVAN assists school staff in cleaning up NEPACCO residue on campus - take samples.
- March 5, 1981
 - EPA Regional Laboratory confirms TCDD at Neosho School.
- March 23-25, 1981
 - EPA/SVAN assists school officials in putting cap over spill area which still has 63 ppb total TCDD. Residue moved to bunker. Syntex erects security fence around spillage.
- April 1981
 - Runoff sample collected following precipitation at Baldwin Park. Results negative.
- April 20, 1988
 - EPA/SVAN prepared summary report on NEPACCO sites including horse arena sites - briefs policy staff - requests guidance from Dioxin Task Force.

- May 21, 1981
 - EPA/SVAN collects samples from the bottom of the digester and adjacent trench at Neosho, Missouri.
Digester sample: 2,500 ppm 2,4,5-TCP
60 ppb total TCDD ppb
- June 15, 1981
 - Syntex begins cleanup of Denney farm site.
- July 28, 1981
 - EPA/SVAN samples filter material and soil on the Erwin farm. TCDD ranges from 6 to 8,700 ppt.
- July 29, 1981
 - Completion of excavation at Denney farm site.
- August 5,6,7, 1981
 - EPA collects environmental samples from the area surrounding the Neosho, Missouri wastewater treatment plant. Results negative.
- October 16, 1981
 - EPA/SVAN and Syntex officials meet with S. B. Erwin about TCDD on farm. Learn of likelihood of TCDD in Spring River fish.
- October 28, 1981
 - EPA/SVAN briefs ^oDixin Task Force on Denney site and Spring River basin. Department of Agriculture also briefed.
- November 10, 1981
 - EPA/SVAN memo addressed ¹likelihood of TCDD in Spring River fish.
- November 16, 1981
 - EPA/SVAN and Missouri Department of Conservation collect Spring River fish.
- November 24, 1981
 - Syntex begins closure of Denney trench.
- December 8, 1981
 - EPA deposes John Lee, Vice president of NEPACCO.
- December 15, 1981
 - EPA/SVAN reports preliminary data showing TCDD in Spring River fish.
- February 19, 1982
 - Water and Wastewater School in Neosho, Missouri dissolved.
- February 24, 1982
 - EPA/SVAN and Syntex take split composite soil sample from Denney site microbiological degradation basin.

- ° March 9, 1982
 - EPA/ENSV finalizes plan for scope of site inspection at horse arenas and secondary sites.
- ° March 16-17, 1982
 - EPA/ENSV on-site reconnaissance of an open dump in Verona, Bill Ray site, samples collected - 160 ppb TCDD.
- ° On or about March 17, 1982
 - ENSV gets copies of CDC documents related to investigation of TCDD in horse arenas and secondary sites.
- ° March 22, 1982
 - EPA/ENSV releases preliminary draft report on Spring River investigation.
- ° March 25, 1982
 - State has public meeting to caution residents about consumption of Spring River fish.
- ° April 1, 1982
 - EPA deposes Edwin Michaels, President of NEPACCO.
- ° April 9, 1982
 - EPA conducts a metal detector survey at Syntex burn area.
- ° May 19, 1982
 - ENSV obtains warrants for sampling at Shenandoah and Bliss Rosati farm.
- ° May 30 - June 2, 1982
 - EPA collects 63 soil, water and sediment samples from horse arenas and fill areas where contaminated material was placed.
- ° June 2, 1982
 - Samples collected from Bill Ray farm site. 2 drums overpacked and taken to Syntex.
- ° June 21, 1982
 - First set of 10 soil samples from Shenandoah arena shipped to Wright State for TCDD analysis. Other samples to Regional Lab.
- ° June 24, 1982
 - Syntex submits proposal for sampling of Syntex trenches, burn area, lagoon area and irrigation area.
- ° July 14, 1982
 - Remaining 37 samples from horse arena investigation sent to Wright State.
- ° July 23, 1982
 - EPA/ENSV finalizes reports on Spring River and Rusha farm.

- July 26, 1982
- August 3, 1982
- August 4, 1982
- August 16, 1982
- August 18, 1982
- August 30, 1982
- On or about September 2, 1982
- September 2, 1982
- On or about September 15, 1982
- September 17, 1982
- October 12, 1982
- October 18, 1982
- October 26, 1982
- On or about October 27, 1982
- EPA/ENSV finalizes final report on Neosho, Missouri.
- EPA/ENSV transmits final reports on Spring River, Neosho and Rusha farm to ARWM.
- Regional Laboratory starts reporting TCDD results from horse arena investigation.
- EPA regional office conducts meeting on TCDD situation with representatives from Headquarters, Missouri Department of Natural Resources, Missouri Department of Conservation, Missouri Division of Health, Federal Emergency Management Agency and CDC.
- TCDD data released to press.
- Bill Rice, David Wagoner and Dan Harris brief EPA/HQ.
- MDNR, Division of Geology and Land Survey, conduct geologic inspection of Minker and Stout sites.
reviews or receives?
- ENSV ~~receives~~ last of TCDD data from Wright State.
- In ARWM, Art Spratlin supersedes Scott Ritchey as Regional TCDD Coordinator.
- ARWM requests ENSV follow-up investigation on list of 41 potential TCDD sites compiled from CDC documents.
- EPA Headquarters recommends 1 ppb TCDD analytical ~~wa~~ detection limit.
- ENSV begins intensive sampling of Stout and Minker sites.
- ENSV finalizes rough cost estimates for various remedial responses at arenas and secondary sites.
- EPA/HQ internal working documents on TCDD situation leaked to Environmental Defense Fund.

° October 28, 1982

- St. Louis Post-Dispatch list potential 40 sites from September 17, 1982, memo.

° November 16, 1982

- ENSV prepares a list of 75 Bliss sites for further investigation and briefs ARWM field investigators.

° November 30, 1982

- ENSV begins sampling streets of Times Beach, Missouri.